women who received daily doses of corticosteroids equivalent to 2–30 mg. of prednisone that there was no correlation between corticosteroid dosage and urinary oestrogen excretion. It seems a little unwise, therefore, to argue, on the basis of a single estimation, that the reduction of the dose of corticosteroid in Dr. Driscoll's patient was responsible for the rise of the oestriol excretion to a normal value. What does the associated fall in pregnanediol excretion reflect?

We would suggest that a controlled study of the many aspects of corticosteroid therapy in pregnancy is necessary and that in the meantime it would be wrong to read too much into reports of isolated cases.—We are, etc.,

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Disodium Cromoglycate in Bronchial Asthma

SIR,—In the article by Dr. D. G. Robertson and others (1 March, p. 552) on disodium cromoglycate in bronchial asthma I am taken to task for criticizing the claims that have been made for this drug on the grounds that the degree of improvement obtained from it has been too small to be worth while in most cases. I did in fact express the view¹ that the "statistically significant" degree of superiority of disodium cromoglycate over a placebo²⁻⁴ was unlikely to be of clinical value, except in an occasional case. In rebutting my criticism Dr. Robertson and his colleagues stated that "a very marked symptomatic improvement" was recorded in the nine patients who benefited from disodium cromoglycate, but if one looks closely at their Table I, in which the total symptom scores are recorded, it will be seen that this claim has little substance.

According to their scoring system a patient would require to record 126 points fewer on disodium cromoglycate than on placebo in order to show consistent improvement, for seven days and seven nights, from the middle of the "severe" grade (8 points) for breathlessness+tightness+ wheeze to the middle of the "moderate" grade (5 points) for these symptoms. I would agree that an improvement of this order could be regarded as modest but useful. When one looks at the relevant column in Table I, however, it can be seen that this degree of superiority was achieved by disodium cromoglycate in only two patients (Cases 9 and 10). In one patient (Case 2) a similar margin was recorded in favour of placebo, but the authors claim extenuating circumstances for this aberrant result. In another patient (Case 7) there was no difference. In four of the remaining seven patients the degree of superiority of disodium cromoglycate over placebo amounted to 7 points (Case 1), 4 points (Case 3), 3 points (Case 5), and 9 points (Case 11). Even if one takes the best of those four results (Case 11) the degree of superiority was equivalent only to the

difference between "moderate" and "severe" breathlessness, tightness, and wheeze on one single day or one single night per week. To claim "very marked symptomatic improvement" from disodium cromoglycate for those four patients is surely to debase the meaning of words. In the remaining three patients the degree of superiority (43, 36, and 31 points) was equivalent to a modest symptomatic improvement on three to five days or nights per week. In terms of breathlessness, tightness, and wheeze the results would thus be more appropriately interpreted as follows:

Disodium cromoglycate markedly superior to placebo ...	2
Disodium cromoglycate marginally superior to placebo ...	3
Placebo markedly superior to disodium cromoglycate ...	1
No difference ...	5
Total ...	11

The results in a few of these cases can admittedly be made to look a little more favourable to disodium cromoglycate if the scores for cough and inhaler usage are included in the analysis, but the basic conclusions, as shown above, remain the same.

Dr. Robertson and his colleagues claim a "highly significant" difference in favour of disodium cromoglycate in terms of morning and evening peak expiratory flow measurements, but mention that the results of the other physiological tests "varied." It would perhaps have been wiser for them to have made more extensive use, in a larger series of patients, of these "more elaborate" tests and of the forced expiratory volume before assuming that these investigations were less reliable than peak expiratory flow in assessing the response of disodium cromoglycate.

For the past 18 months I seem to have been the only correspondent to the weekly medical journals who has offered any serious criticism of the spate of articles in favour of disodium cromoglycate. The pressure on medical practitioners to prescribe this drug is now intense, and I think it is time that some of the more experienced chest physicians looked critically at the evidence for and against it, and either wrote in support of my view that disodium cromoglycate is of only marginal value in the treatment of bronchial asthma, or told me that the criticism I have made of all the clinical trials, apart from that reported by Kidner *et al.*,⁵ are unfounded.—I am, etc.,

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Contamination of Disinfectants

SIR,—The observation of Dr. G. A. J. Ayliffe and others that hexachlorophane detergent creams which are used for hand-washing can become contaminated with Gram-negative bacteria (22 February, p. 505) prompts me to report similar findings.

Sixteen dispensers of a detergent cream containing 3% hexachlorophane which were examined were all contaminated. In contrast with the findings of Dr. Ayliffe and his colleagues, the organisms most commonly isolated were *Candida* spp., which were present in 13 dispensers, in three of which they were accompanied by *Klebsiella* spp. In the remaining three, *Klebsiella* spp. were present alone. *Klebsiella* spp. were also isolated from the necks of four stock bottles, two of which were unused, and *Candida* spp. were isolated from the necks of two others. Samples of the cream taken from the bottles without touching the sides were sterile. A notice on stock bottles from one manufacturer warned that dispensers should be rinsed in 70% alcohol before refilling, but the dispensers themselves bore no warning. Moreover, I suspect that disinfection by this method may not be adequate, as some dispensers have narrow nozzles in which organisms might prove inaccessible.

It seems unwise to rely on the self-disinfecting properties of the fluid in the dispenser, for resistant organisms have already been found in working solutions of cetrimide,¹ chlorhexidine,² Savlon,³ and the phenolic disinfectant Printol.³ I suggest that a heat process is the only safe method of sterilizing bottles which are to be refilled with a disinfectant solution. An alternative to sterilization would be the provision of disposable bottles.

A possible source of infection equally as dangerous as the hexachlorophane cream was also discovered here when two samples of oily cream, B.P., which was used as an emollient after hand-washing, were found to be contaminated. One contained *Pseudomonas aeruginosa*, and the other *Staphylococcus aureus* and *Escherichia coli*. This hand cream is no longer used in this hospital.—I am, etc.,

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Pregnancy Prurigo

SIR,—Having read your leading article on pregnancy prurigo (15 February, p. 397), I would like to question on two counts the validity of using progestins in this condition.

Firstly, in view of the vast quantities of progesterone already being produced in pregnancy, it must be open to question whether they have any worthwhile effect in this condition when given therapeutically. Secondly, norethisterone is probably one of the worst examples you could have given. It was first mooted in 1958 that progestins, when given in pregnancy, may cause virilization of the female foetus.

Jacobson¹ found virilization in 18% of female infants whose mothers had received norethisterone for several weeks. Some of the mothers themselves complained of androgenic side-effects, such as acne and hoarseness.

In my limited experience of this condition I have found treatment may well be necessary for several weeks, and therefore the giving of norethisterone could certainly cause virilization. Other progestins, including ethisterone, have been incriminated, though